National Tax Journal 50(3): 573:592

THE SALES TAX AND ELECTRONIC COMMERCE: SO WHAT'S NEW?

William F. Fox
Professor of Economics and Head
Department of Economics
The University of Tennessee, Knoxville
Phone: (423) 974-6112
FAX: (423) 974-3100
Email: billfox@utk.edu

Matthew N. Murray
Associate Professor of Economics
The University of Tennessee, Knoxville
Phone: (423) 974-6084
FAX: (423) 974-3100
Email: mmurray1@utk.edu

ABSTRACT

This paper takes a pragmatic look at the appropriate sales tax policy for the Information Highway, composed of Internet/online service providers, content, hardware/software and telecommunications transmission. Our general conclusion is that the sales tax should be designed largely consistent with the current structure. At the same time, we argue for a more inclusive approach to taxing final sales and a more liberal treatment of business input purchases. Specifically, we argue for destination-based taxes; an economic concept of nexus preferably enabled through Congressional action; a direct use rule for exemption of business purchases; and the enumeration of nontaxable as opposed to taxable transactions. Neutrality should be enhanced by taxing similarly all functionally equivalent activities.

INTRODUCTION

Rapid growth in consumption of telecommunication services and electronic commerce will not bring the sales tax to its knees. At the same time, taxing electronic transactions presents many challenges, particularly because of differing perspectives on how taxes should be structured. The states are pushing toward more extensive taxation of electronic services, at least in part to solve a perceived revenue adequacy problem. Yet they realize that if their tax policy is too aggressive, they may cause tax base flight and retard the pace of economic development. Service providers have legitimate concerns about sales tax compliance burdens and an uneven playing field in final consumer markets because of the way in which both inputs and outputs are taxed. Some consumers resist sales taxes on telecommunication and electronic services because of the direct tax burden and the fear of government intrusion on the final frontier of the Internet. Nonetheless, in the final analysis the sales tax must and will be applied increasingly to electronic transactions. Thus, the issue is how to structure an administrable sales tax system that can balance the often competing goals of tax policy.

The purpose of this paper is to provide the economist=s perspective on two questions that must be answered when imposing the sales tax on electronic commerce: (i) what set of activities belong in the taxable base and (ii) for those activities deemed taxable, in which state are they taxable? These questions are not independent, since, for example, the ability to tax a transaction in the right place may influence whether the transaction should be taxed. A basic conclusion is that sales taxation of electronic commerce does not in general raise unexplored issues since the same major concerns arise elsewhere in sales taxation. For example, the problem of taxing services that are produced in one state and consumed in another has been addressed for many years, independent of electronic commerce considerations. What is new for sales taxation is the degree to which problem areas, particularly related to multistate transactions, occur. An important reason is that capital used in many electronic commerce industries probably is more geographically mobile than capital in other industries. Moreover, capital often can be located anywhere telecommunication services are located, and need not be in close proximity to consumers. A consequence of the high mobility of capital is that state economic

development goals may take precedence over revenue raising concerns in policy discussions.

It is well understood that the sales tax base differs dramatically from consumption, both because a substantial portion of consumption goes untaxed and because many intermediate transactions are taxed. A policy issue is whether taxes on electronic commerce should be structured as a pure consumption tax or the existing narrower sales tax framework. We conclude that sales taxes should be imposed on electronic commerce in a manner that is largely consistent with the current tax structure. However, for reasons described below we would be more generous in the granting of production exemptions, but also more inclusive in the taxation of electronic services than is generally true with the sales tax.

WHERE ACTIVITIES ARE TAXABLE

The key state policy issues regarding where electronic commerce transactions should be taxed are the same as those that generally apply to sales taxation: nexus standards and situsing rules.

Destination, Residence or Source Based

Sales taxes can be structured on a destination, residence or pure source basis. With a destination tax, the intent is to impose the tax at the situs of consumption, and the comprehensive tax base is domestic consumption. With a source tax, the intent is to impose the tax where production takes place, and the comprehensive tax base is domestic consumption plus net exports. With a residence tax, the tax is imposed where the taxpayer is headquartered. The residence-based tax is a source tax, where source is defined to be at the firm=s headquarters. In practice, all three forms can be found in existing sales tax statutes, making it difficult to discern actual intent. Under the Hawaii General Excise Tax (GET), services are taxed on a pure source basis, with the GET levied on all services produced in Hawaii, regardless of where they are enjoyed. The sales tax on consumer purchases normally is intended to be destination based, though liability is almost exclusively determined where items are purchased, not where they are consumed. The companion use tax, levied in all sales taxing states, generally is a means of moving the overall structure towards a destination basis, since the use tax A

usually is levied on the storage, use or consumption in the state of tangible property so purchased, other than property upon which the sales tax has been paid@ (Commerce Clearing House, p. 8315). Except for the sales tax on automobiles, often paid where the purchaser registers the vehicle, residence-based taxes are more common outside the United States. Thus, the value added tax in Russia[1] and the sales tax in Bosnia generally are paid at the headquarters of the firm, not where the value added or sales occur.

Deciding which basis is appropriate for electronic commerce requires making trade offs between the tax=s overall intent and the standard criteria used to evaluate a tax, including revenue productivity, efficiency, equity, administration and compliance, and constitutionality. Like many questions in tax policy, the choice of taxable basis requires making a judgement after weighing factors that often point in different directions. We conclude that a destination tax should be adopted to the maximum extent possible to obtain neutral treatment of services delivered from different locations. At the same time, it is recognized that this approach is not free of problems. But the alternative, source taxation, is distortionary, and differential tax rates have the potential to alter substantially the location of production. Also, state sales taxes are normally evaluated as consumption taxes, and for this reason the preference is to levy a destination tax. Source-based taxes appear superior on the basis of administrative/compliance costs and constitutional considerations, but in an open economy, avoidance through the mobility of capital could be so great that there would be little remaining base to administer. The preference based on the revenue criterion depends on the economic structure of each state and the service delivery demands of residents.

Grubert and Newlon (1995) observe that at the margin the revenue flow is the same for source and destination taxes, because exports must equal imports over all time.[2] This suggests that revenues

---

[1]Branches of firms are normally treated as separate corporations in Russia, and the tax would normally be paid at the branch.

[2]Grubert and Newlon note that inframarginal revenues could differ because of initial capital stocks, transfer pricing and other reasons.

may not be an important issue in selecting a source versus a destination tax, but the observation does not fit the political economy of state tax policy. First, equality between exports and imports does not mean equality of sales tax revenues because the actual bases differ dramatically from consumption. Second, in the short-run time horizons considered by most politicians, current net exporting states receive more revenues from a source tax and current net importing states more from a destination tax.[3] More specifically, states that are net exporters of taxable sales raise additional revenues with a source tax and net importers with a destination tax.

The predominate efficiency issue is how the different structures affect the location of capital.[4] The high degree of capital mobility for some types of electronic commerce (arising because there is little reason for producers to locate near inputs and there are low costs of transporting output to users) means that economic development concerns are likely to play an even more prominent role in tax policy decisions regarding electronic commerce than for other industries, though the geographic mobility of service production can vary widely by type of service. For example, electronic merchandising may be very mobile but highly technical legal services may be much less so across wide areas. In concept, destination tax burdens imposed by a state cannot be altered by shifting the location of where electronic commerce is produced.[5] Thus, states can impose destination taxes across a range of rates, and remain equally competitive for the situsing of production. However, destination taxes potentially can be avoided by locating production outside the United States.

---

[3]Some assertions have been made that similar logic was the driving force behind the debate between market and money center states in the recent controversy over how to structure state corporate income taxes for financial institutions.

[4]Little is known about the influence of the sales tax on business purchases and location decisions. Effects of the sales tax on location of labor are ignored here, though Fox, Herzog, and Schlottmann (1989) find that local taxes and public services influence the propensity to migrate. Below we discuss the consequences for consumer spending.

[5]Grubert and Newlon (p.629) find different burdens on domestic and foreign investment with a destination tax, but this arises from their assumption of a differential tax on capital income in the foreign state.

Production costs rise with source taxes, regardless of where consumption takes place.[6] As a result, there is an incentive to relocate production to low or zero tax states to avoid origin taxes.[7] Parallels to taxing electronic services on a source basis are a tax on tangible goods at the point of production and on mail order sales at the point from which the goods are shipped.

Source-based transaction taxes applied to electronic commerce have clear compliance and administrative cost advantages over their destination-based counterparts through elimination of the use tax problem. A destination tax requires retailers to account for sales made in all market states, distinguish between taxable and exempt transactions and apply the proper tax rate to the transaction.[8] Under the source alternative, retailers need only know the transaction tax system within their states of location, an especially important advantage for smaller firms with relatively high compliance costs.[9] Elimination of the use tax would also reduce administrative costs, especially costs tied to auditing and enforcement. Under a destination tax system, tax administration may need an auditing presence in virtually all states to ensure the integrity of use tax laws.

The advantages of source-based taxes are more limited for service suppliers that produce across jurisdictional boundaries. In this instance, taxpayers must apportion the production of sales, and

---

[6]Residence taxes are the extreme case of allowing avoidance behavior because they may permit tax burdens to be reduced by simply moving the company headquarters, with no change in the location of productive capital.

[7]The conclusion that source not destination taxes affect location differs from Grubert and Newlon, who find no tax burden on capital with source-based consumption taxes. Their conclusion is based on a VAT with expensing of capital, but the capital may be taxable under existing sales tax statutes.

[8]The interstate use tax problem may be mitigated by the development of computer software that enables electronic merchants to determine the taxable status of specific transactions and assign proper tax rates. An example is the TAXWARE program for state and local sales taxes which enables tax determination based on the consumer=s zip code.

[9]Sandford et al. (1989) cite a Peat Marwick Mitchell study of the compliance costs of the existing state/local sales tax which shows that small firms confront twice the compliance burden of the median firm, and three times the compliance burden of large firms. A similar pattern emerges for the VAT (Cnossen, 1994).

tax administrators must verify taxpayer information reports across jurisdictions. In essence, the issue of whether there are cost savings requires comparing the costs of allocating inputs across production states and allocating sales across market states. Both corporate service providers and state tax administrators may enjoy significant savings from source-based taxation of final sales since the sales component of the traditional three-factor corporate income apportionment formula is generally situsedon the basis of production under UDITPA.[10] However, there are likely to be significant differences in the sales and the corporate income tax situsing rules in practice.

Nexus

The application of destination-based taxes to electronic commerce can only be effective if electronic merchants are deemed to have nexus in their market states. Recent case law and evolving theories of nexus appear to provide a legal basis for the imposition of use tax obligations on interstate electronic marketers. The (economist's) logic behind this conclusion is explored below, focusing first on the case of tangible goods. Should the legal interpretations presented here be insufficient to resolve the nexus question, a Congressional remedy will be required.

Tangible goods. A state government has two means of collecting tax on final sales of tangible items within its jurisdiction, first from retailers making final sales and second from final consumers (including businesses) who directly remit the tax. Under the *sales* tax, the collection burden necessarily falls on retailers that have a physical presence at the point of sale. In the case of *use* taxable sales, where tangible goods are purchased free of tax or at a lower rate in another jurisdiction, vendor tax collection only can be required if the seller has substantial nexus in the jurisdiction of consumer use. In practice (see below) substantial nexus requires some physical presence on the part of sellers of tangible property in the taxing jurisdiction. Absent nexus for vendors, the tax remittance burden falls on the self

---

[10]Corporate entities typically situs final sales of tangible goods (versus intangibles) for the corporate income tax based on the destination where goods are sold rather than where they are produced.

assessment system for final consumers. The lack of nexus for many firms, coupled with limited self reporting by individuals, leads to tax base erosion, inefficiencies and inequities.[11] Self assessment operates through the filing of use tax returns, often accommodated by unique sales tax returns or through the state income tax. Use tax reporting by individuals is limited. For businesses, use tax responsibilities are reasonably clear and tax filings are easily accommodated by the standard reporting apparatus.

The ability of states to impose collection and remittance obligations on out-of-state sellers of tangible goods is constrained by constitutional considerations as interpreted through a series of court judgements, culminating with Quill Corp. v. N.D., 112 U.S. 298 (1992). Constitutional constraints are the Due Process Clause of the 14th Amendment, which addresses the fairness of a tax, and the Commerce Clause of the Constitution, which focuses on whether a tax impedes interstate commerce. Nexus under the Due Process Clause requires only minimum contacts with a taxing jurisdiction and is easily established. A four-prong test is used to determine whether a tax violates the Commerce Clause: substantial nexus, fair apportionment (including internal and external consistency), nondiscrimination with respect to interstate trade and tax burdens fairly related to the benefits received from the taxing jurisdiction.

At issue under Quill was whether an out-of-state seller had nexus, where the seller's in-state contacts were confined to licensed software and common carrier delivery of office equipment. The court concluded that these contacts were insufficient to constitute substantial nexus.

Electronic commerce. Two aspects of the court's decision in Quill are especially important to electronic commerce. First, the court solidified the "bright line physical presence" test for the safe harbor of direct marketers of tangible products who rely on common carrier delivery. At the same time, the Court indicated that the bright line test did not generalize to other forms of interstate commerce, and that subsequent cases would be treated on their own merits. Second, the court's ruling effectively

---

[11]For example, ACIR (1994) estimates the interstate tax gap on mail order sales at 2.4 percent of sales and use tax collections in 1994.

heightened the importance of *substantial* nexus under the Commerce Clause, since the minimum physical contact requirements of the Due Process Clause are more easily met.

Implications of the Quill decision for electronic commerce have led to two interpretations. On the one hand, it can be argued that Quill limits a state's ability to impose collection burdens on out-of-state service providers. The reason is that electronic contacts constitute less physical contact with a state than would be required to establish substantial nexus following Quill. This seems to be the interpretation taken, for example, by the Interactive Services Association Task Force (1997).[12] At the same time, the court's unwillingness to apply an explicit safe harbor to electronic transactions and its willingness to consider other cases on their merits have led some to conclude that a wide array of non-common carrier contacts *would* establish nexus.[13]

Together with Quill, two court cases involving intangibles and a number of evolving nexus theories will shape the legal boundaries of nexus for electronic commerce and telecommunications in the future.[14] The first court case is Goldberg v. Sweet, 488 U.S. 252 (1989), which was a dispute over the fair apportionment of a gross receipts tax on interstate telecommunications services in Illinois. The case did not center on the nexus question, since the plaintiff agreed that nexus was established. But in the Court's response, it used a nexus argument to conclude the tax was fairly apportioned. One requirement for fair apportionment is that the tax be externally consistent, i.e., the tax can fall only on the share of interstate commerce that reflects in-state activity. The underlying concern with external consistency is the threat of multiple taxation and the Court concluded that the risk of multiple taxation

---

[12]The Task Force did recognize the importance of the Goldberg v. Sweet telecommunications case (discussed below) as a potential basis for situsing sales and resolving many of the problems related to interstate commerce. It is not clear where the Task Force stands on the subject of substantial nexus and physical presence as applied to electronic commerce.

[13]See, for example, the position taken by the Multistate Tax Commission (1995 and 1996).

[14]The following material draws liberally on Eisenstein (1997) and Grierson (1996). Grierson is especially noteworthy since he offers a broad-based proposal for taxing information services, including model statutes.

[15]Moreover provisions existed for crediting the amount of tax paid in other jurisdictions.

was negligible since nexus would exist in only two states.[15] Under Goldberg v. Sweet, nexus is established if the service originates in the state *or* terminates in the state, and the service is billed to an in-state address. *Originates* implies the source of the call and hence the source of at least some production; *terminates* implies the destination of the call. This nexus standard is a significant departure from the physical presence test applied to marketers of tangible products.

The second relevant case is Oklahoma Tax Commission v. Jefferson Lines, 115 S. Ct. 1331 (1995), which like Goldberg v. Sweet was not a question of nexus but a question of fair apportionment. Nonetheless, nexus, as viewed in the Jefferson Lines case, involved the ability of a single state (at the origin) to tax the entire value of the ticket. The concern was once again the threat of multiple taxation, should other states seek to tax the same activity. The Court concluded that purchase of the ticket and provision of the service (i.e., commencement of the trip) established nexus and allowed the state to tax the ticket in its entirety. Multiple taxation could not result because agreement, payment and delivery of the service could take place in only one state. Grierson (1996, pp.661) argues that this means the taxable sale is a "wholly local event," akin to the final sale of a tangible product by a retailer with nexus. Accordingly, the vendor's responsibility is over collection and remittance of the *sales* tax rather than the *use* tax. This distinction would allow electronic transactions (subject to the sales tax) to be treated differently from tangible goods under Quill (subject to the use tax).

The nexus reasoning applied in Jefferson Lines is analogous to Goldberg v. Sweet. The same framework might apply generally to electronic transactions. For example, if the destination of electronic services is seen to be at the point of use (as with the display of electronic images on one's personal computer) and the service is billed to an in-state address, the seller of electronic services could be deemed to have nexus. This view of nexus requires no physical presence, and translates into an economic presence concept of nexus. Two outstanding questions for electronic commerce are whether the courts would first require the marketer to have substantial (or some form of) physical presence in the

---

[15]Moreover provisions existed for crediting the amount of tax paid in other jurisdictions.

state of sale and whether electronic merchants even have a billing address for consumers.

The best policy approach, one not without some risk, would be to follow the precedent of Goldberg v. Sweet and Jefferson Lines. Insofar as electronic services originate in the state or terminate in the state, and are billed in the state, electronic service providers would have nexus and the state could impose tax remittance obligations using these cases as precedent. Depending on industry bundling and billing practices, this also may help protect third parties from the responsibility of collecting tax on final sales over which they have little or no control. For example, if an internet service provider (ISP) affords access to content/services provided by an electronic merchant, the electronic merchant would be deemed to have nexus if the Goldberg v. Sweet nexus requirements were met, and would be required to collect tax on its sales. If services/content were bundled and billed together with access charges, then the service and access providers would be deemed to have nexus if the service originates in state or terminates in state, and is billed in state. The ISP's willingness to bundle and bill services together with access would mean that they would be willing to accept the tax collection responsibility. Absent bundling, consumers would need to acquire individual components of the transaction from separate vendors, and states would need to seek tax collections from independent vendors.

The states have alternative policy avenues to impose collection burdens on out-of-state sellers of electronic services through a set of evolving nexus theories.[16] Most prominent are third party theories where the in-state activities and physical presence of entities related to the out-of-jurisdiction seller are construed as establishing nexus. The concept of attributional nexus (or the agency theory) has had some success. Here the physical presence of agents of the company may establish nexus if the agents' actions are instrumental to establishing and maintaining an in-state market for the out-of-state firm. An example would be an online seller of entertainment services who may use an internet service provider to access a state's market. The closely related concept of affiliate nexus, where the third party is a member of a corporate family, has not had much success in the courts.

---

[16]See Steele (1997), Grierson (1996) and Frieden and Porter (1996).

Using evolving nexus theories to push the tax policy envelope could pose a legal quagmire for all parties. Confusion, ambiguity and litigation costs will be sustained as all sides seek to enumerate specifically the range of third party contacts that constitute a basis for nexus. The preferred policy approach would be reliance on Goldberg v. Sweet and Jefferson Lines (or Congressional action, as noted elsewhere) to reach a final legal conclusion that nexus exists, in cases where services are received and billed in a state.

Situsing Sales

The Court's rulings in Goldberg v. Sweet and Jefferson Lines may have resolved many of the sales tax situsing questions for electronic transactions,[17] though it may take years to work through the details. Following the precedent of these two cases, no apportionment would be required for taxes on electronic transactions that merely traverse multiple jurisdictions. This means the full value of a sale may be sitused to a single jurisdiction. The question then arises as to whether transactions would be taxed at their origin or their destination. Here it seems clear that the Court has concluded that transactions may be taxed at destination, insofar as the billing address for the buyer of the electronic service reflects the destination of the purchase. In fact, taxing transactions at their origin would seem to be precluded by Goldberg v. Sweet, unless the state of origin and state of service billing were the same. In spirit at least, the sales tax on electronic commerce remains a destination tax.[18]

WHICH ITEMS SHOULD BE TAXABLE?

The Interactive Services Association (1997) suggested four potential components of the base

---

[17]See Grierson (1996) for a detailed discussion.

[18]Eisenstein (1997, pp. 605) interprets Jefferson Lines to mean that only the source state (e.g., the state where computer servers are located) could tax the transaction. This is in strict accordance with Jefferson Lines since the source state was also the taxing state. But in practice consumers initiate use of electronic services from (for example) their own personal computer, presumably in many cases at the situs of service billing.

for electronic commerce: content, hardware and software, transmission, and internet and online service. While this paradigm can raise a series of questions, such as whether content and transmission can be separated, it is a convenient structure for considering what activities should be taxable. This section is an examination of which aspects of these four components should be taxable, when production exemptions should be granted and what is the appropriate taxable base. The technology and applications of the information highway are developing so rapidly that the process of deciding what belongs in the base is ongoing, and the states should realize that their decisions on the appropriate tax base may need to change over time. The states must track development of electronic commerce and regularly reconsider whatever decisions are made regarding the tax base.

Content of Electronic Commerce

Ultimately, the content of electronic commerce, which can be divided into electronic merchandising and services delivered over electronic media, comprises much of the potential tax base. Tangible goods sold through electronic merchandising should be taxed commensurate with tangible goods that are sold through other means. States can look to current practice to determine which tangible goods to tax. The tax should be due where the tangible goods are delivered, and the rate should be set according to that state. Thus, items ordered from a vendor operating over the internet should be taxable in the state, and at the rate where the individual placing the order is located.

All consumer purchases of electronic services would be taxable with a pure consumption tax, though such broad-based taxation of services would differ markedly from current practice. (Most states, with the exception of Hawaii, New Mexico and South Dakota, tax only a relatively small number of services.) Despite the much ballyhooed attempts by many states during the past decade to expand their bases to services (see Fox and Murray, 1988, for a list of some attempts), the end result was piecemeal expansion to a series of enumerated services. Nonetheless, the principle remains that services purchased by final consumers generally should be taxable, and now, when the industries are in developmental stages is politically the best time to legislate their inclusion in the base.

It would probably be most effective for states to pass new legislation to tax electronic

commerce, rather than try to retrofit existing laws and terminology. We are not suggesting new taxes on electronic commerce, only that legislation appropriately be applied to electronic commerce. To the extent possible, legislation should adopt broad language to incorporate electronic commerce in the base, rather than try to enumerate specific services. One important reason is that states will be unable to anticipate the range of services offered through electronic means as technology develops further. Nonetheless, electronic services should be evaluated separately to ensure they are appropriately taxable, and enumerated exemptions for certain services should be granted in cases where taxation would be ineffective. An extensive set of services should be in the base to increase revenues (or allow lower rates), improve horizontal equity and enhance neutrality. However, the taxable set must be tempered by limitations on administrative/compliance capacities, constitutional restrictions (though these mostly apply to where the services are to be taxed) and the desire to avoid taxation of intermediate transactions.

Several basic guidelines should be followed in identifying which specific services to tax. For neutrality and horizontal equity, states should seek to tax electronic commerce and telecommunications services and functionally equivalent tangible goods and services in the same fashion, even though they are delivered to the user through different means. The taxable status of transactions should be independent of the form through which the tangible good or service is delivered. Books, magazines, and music received in electronic form and games played over the Internet are obvious examples where both the tangible good and the electronic product should be taxable. Frieden and Porter (1996) report that only about one half of the states tax electronically transferred software, though all but one tax software sold in tangible form, illustrating a frequent violation of this principle. Any firm with nexus should be expected to collect the tax, even though nexus provisions may be extended farther for firms operating through electronic means. Neutrality in treatment of income was a key goal as well in Treasury=s white paper on taxation of electronic commerce.

Similarly, services that are functionally equivalent and are not taxable when provided in a non-electronic form, also should not be taxable when offered across the electronic media. Delivery of medical, legal, financial and accounting services over the information highway should not currently be

taxed in most states, because these same services are not taxed when provided in other forms.

A series of questions about application of the tax to services and electronic commerce must be answered, just as happens with the existing sales tax. One area is decisions on what constitutes a functionally equivalent service. For example, both customized tax advice and manuals on how to prepare your own taxes may be offered electronically. Hard copies of the manuals would currently be taxable in many states and the customized tax advice would not be taxable. Rules similar to those used for software seem appropriate -- customized services would be exempt and canned services would be taxable. But the issue will be more complicated, because the electronic manual may be available with the capacity to click in and ask questions of consultants, thereby mixing customized and canned tax counsel.

As already noted, care must be taken to avoid source taxes, though on the surface it may be hard to discern when the tax is on a source basis. For example, the tax should be levied on telephone calls, but not prepaid cards. Several states, including Iowa, Tennessee, Texas, and Washington and the District of Columbia, impose sales taxes on the sale of prepaid cards. The telephone call is the service being consumed, and the prepaid card represents a means to pay for calls. At the same time, taxing only the use of the card may mean that the markup above cost of the telephone call goes untaxed, though the markup could be included in the use tax base, violating the goal of taxing all consumption. Administrative advantages from taxing prepaid telephone cards at the point of purchase are obvious, but the advantages generally are the normal set that occur with taxing on a source basis. One point to observe is that with a destination tax prepaid card vendors may need to sell the cards without knowledge of the tax rate that is to be imposed. Levying the sales tax on prepaid cards rather than on phone calls provides significant avoidance opportunities as sale of the cards will be shifted to non-sales taxing states. For example, AT&T or MCI could sell prepaid telephone calls from an Oregon subsidiary, and legally avoid a tax on use of prepaid cards in other places. Taxation of prepaid cards also raises the possibility that the call could be taxed twice, once when the prepaid card is purchased and again when the call is made.

Taxation of services that are mostly purchased by businesses should be avoided.

Videoconferencing may be one example, but the expected expansion of personal applications for videoconferencing could mean exclusion of items that are purchased by final consumers. So, caution must be exercised in exempting services simply because businesses appear to be the major source of demand.

Hardware and Software

In recent years states have come to grips with the taxability of computer hardware and software, and the result is much of the hardware and software used by electronic commerce firms is taxable under current statutes. Commerce Clearing House (1997) reports that all 45 sales taxing states and the District of Columbia tax computer hardware. Exemptions are allowed for some uses, such as certain manufacturing and research applications. All taxing states tax canned programs, one half of the states tax modified canned programs, and about one third tax custom programs, though taxability may depend on the form through which the software is delivered. In the production exemption section below, we argue that firms in the electronic commerce industries should receive exemptions under a direct use rule. Direct use exemptions would allow many of the computers and much of the software used by electronic commerce firms to be exempt.

Consumer purchases of hardware and software can be situsedon a destination basis, as they already are. Some business purchases that are not exempt under the direct use rule could be more difficult to situs because the software may be used in multiple states or the hardware may be carried to several states, such as occurs with laptop computers. Situsing of major business purchases should be apportioned across states on the basis of use. Smaller business purchases, such as laptop computers, may expeditiously be situsedin the state of predominant use. Apportionment should be avoided for personal use, since most uses will be concentrated in a single jurisdiction and the costs of administration would be prohibitive.

Access to Internet and Online Services

The use of online and internet access is consumption for final users and generally belongs in the

sales tax base. Business purchases of online access could receive exemption in some circumstances, but likely will be taxable in most cases. At least 15 states currently tax internet access, generally with no distinction between business and residential use (Commerce Clearing House, March 10, 1997). The two states that distinguish between the types of users, Florida and Ohio, tax business but not residential charges, which is the reverse of good tax policy.

An issue is how to tax bundled services, such as those delivered by America OnLine which provide Internet access and services such as news, when, if separately offered, some of the services may be taxable and some may not. The options are to tax the entire value of the purchase if any portion is taxable, to tax none of the purchase if any portion is non-taxable or to decompose the purchase into the taxable and non-taxable components. In other contexts, the sales tax is normally extended to the entire price when non-taxable components of a sale are not listed separately. Decomposing the purchase price into the taxable and non-taxable portions is preferred for neutrality reasons, but the states may find it very difficult to audit the taxable share. The option of taxing none of the purchase, if any component is non-taxable, encourages bundling for tax avoidance purposes and is unacceptable. Taxing all of the price does not create any avoidance possibilities, but discourages bundling, which is a key marketing strategy for service providers, and thereby violates the neutrality goal for tax policy. Perhaps the best approach is to tax the entire sale price unless the vendor can clearly demonstrate that a significant portion of the transaction is otherwise untaxable. In such cases an apportioned share should be taxed.

Telecommunications

Taxation of telecommunications transmission and enhanced (vertical) services such as call waiting exhibits considerable heterogeneity across the states (McHugh, 1996a and 1996b), reflecting in part an historical legacy of regulation. About two thirds of the states tax both interstate and intrastate calls and about one third tax only intrastate calls. Enhanced services are often taxed when other telecommunications services are taxed. Most business purchases of telecommunications services are taxed by the states in the same way as final sales to households. About two thirds of the states exempt

the purchase by telecommunications companies of some capital, although the exemptions tend to be narrow and specialized, applying, for example to poles or switching equipment. Distortionary impacts of this tax structure on telecommunication service providers have been masked by a web of regulation that is now disappearing.

The general policy goal should be to tax both basic transmission (i.e., local and long distance calling) and enhanced services at their destination, which in practice generally means the billing address of the consumer. If functionally equivalent telecommunications services are untaxed, (for example, Internet "phone" calls and electronic mail) efforts should be made to tax such services rather than erode the base through expanded exemptions of currently taxable activities. In other words, the consumption side should experience a leveling up rather than a leveling down of the tax base.

Tax policy for business input purchases should move toward a leveling down of the playing field, removing input taxes from the production of functionally equivalent services when possible. Changing the tax treatment of input purchases by telecommunication providers and sales of telecommunication services to business is problematic because the majority of these transactions are currently in the base, and state and local governments would have substantial revenue losses if broad exemptions were granted. An important principle is that providers of functionally equivalent services should receive similar tax treatment, although implementation is difficult for diverse multiproduct firms that are responding to rapid technological change. To help guide this process, policy should move towards exempting directly used inputs, as generally prescribed here. Sale for resale exemptions should also be provided when administratively feasible and when revenue costs are manageable.

Exemptions for Production Inputs

A sales tax structured as a pure consumption tax would exempt all inter-business transactions. For a variety of reasons, including revenue loss and administration/compliance, this principle is not followed. The potential for exemptions in the area of electronic commerce arises in two contexts, purchases by electronic commerce firms and purchases by business consumers of electronic commerce goods or services.

Exemptions for firms purchasing electronic services should follow the rules currently applied to other input purchases. Inputs that become component parts of manufactured goods and sales for resale normally are exempt. Under these rules, very few exemptions for purchases of electronic commerce are likely to be allowed. Component parts rules normally permit exemptions when purchased inputs become a physical part of a manufactured commodity. Exemptions generally are not made available for any other type of input purchase, which would include essentially all services. A number of states allow exemptions for some commodities that are used up in the production of goods, such as may occur with fuel, even if the commodities do not obviously become a component of the final product. However, even in these cases exemptions are generally not extended to services used up in production of a tangible good. To achieve neutrality, electronic services should be granted production exemptions in cases where the service is functionally equivalent to a tangible good that receives exemption.

Exemptions for purchases by electronic commerce firms do suggest some new issues for sales tax policy. Electronic commerce firms purchase tangible goods, including computers, services, and software, in carrying out their production and delivery functions, and many of these transactions, including computer purchases, are normally taxable. Purchases of tangible property for use in delivering services are generally not afforded exemption, at least in part because the final service often is not taxable.[19] The concept is that taxing the inputs is an indirect means of taxing the service.[20] In many cases no exemption is granted for inputs used in delivering services, even if the services are taxable, though an exception is custom software, which often is not taxable.

We argue that inputs used in production of electronic commerce should be granted exemptions under a direct use rule. One reason for granting exemptions is to reduce pyramiding of the tax when the

---

[19]An exception is that switching equipment used by telephone companies often is exempt.

[20]This can be likened to an exemption under a VAT, where a final stage vendor does not impose tax on sales and is disallowed access to tax credits on the purchase of intermediate goods/services. One justification for exemptions is the high administrative/compliance costs associated with collecting the tax on final sales.

final output is taxable, but exemptions should be granted even if the final product is not sales taxable. Taxing inputs as a means of taxing the final product is a source-based approach to taxing services, and as noted above, source taxes are particularly inappropriate for electronic commerce. Failure to allow broad exemptions for inputs used in production of electronic commerce opens widespread opportunities for tax avoidance by relocating production, and could place the taxing states in an uncompetitive position to be producers of electronic commerce. Of course, the effects on production costs of imposing sales taxes on inputs can be very small for firms that make limited purchases of production inputs other than labor. In these cases, the implications for location of production could be relatively unimportant. Another advantage of direct use exemptions is much of the controversy over whether sales for resale are exempt would be eliminated.

With a direct use rule, exemptions are allowed for all inputs that are directly employed in producing the output. An example of the direct use rule is that a computer purchased as the server for delivering a service over the Web would be exempt, but one purchased to handle a firm=s accounting records would be taxable. The general concept is similar to exemptions available for other industries. However, the direct use rule is more liberal in allowing exemptions than is the component parts rule applied to manufacturers, because the former only requires that a purchase be used directly in production rather than requiring that it actually become part of the product. The physical tests often used for determining exemptions for tangible goods under the component parts rules are not administrable for electronic commerce, since there would be no means for determining whether one set of electronic signals is a component part of another set. As with other sales tax areas, substantial discussion and litigation will be necessary to determine which inputs are directly used in production, but the states and taxpayers have considerable experience at refining exemptions in other contexts.

The direct use rule will result in significant foregone revenues for states, but the states may be willing to accept the loss of revenues, rather than lose electronic commerce firms. However, as already noted, it may be unacceptable from the states perspective to significantly expand exemptions for companies already in the base, such as telecommunications firms. A compromise is to continue exemptions as they currently are structured for telecommunications companies, except in circumstances

where the input is functionally equivalent to one exempted for competing electronic commerce companies. Then, telecommunications firms also would receive exemption for these functionally equivalent inputs. However, such a rule will be administratively difficult to apply.

Electronic merchants should receive sale for resale exemptions in the same manner as other retailers. Again, the method through which the sale occurs should be of no importance in determining availability of exemptions.

Taxable Base

The taxable base for electronic services must be equal to the value of services received. Pricing strategies, including bundling of services, the use of advertising to provide lower cost services to consumers, and other approaches, require careful definition of this base.[21] The taxable base for electronic services obviously should include payments made by consumers. No distinction should be made between whether the payment is made as a fee for transmission, access or content. In addition, electronic vendors should pay use tax on other revenue sources that are directly linked to delivery of the service, such as the value of advertising. Nonetheless, the taxable base must be set to ensure that administrative/compliance burdens are reasonable. As practical decisions are made on what is taxable, states should recognize that they may not be able to collect every possible dollar of tax revenue, but this is the nature of policy tradeoffs.

Many services will be available simultaneously to consumers across multiple states. For example, a search engine may be concurrently used by consumers in many different states at the same time. In such cases no single destination can be identified, so each state=s use tax base should be an apportioned share of the revenues associated with advertising and other revenue sources. The base could be apportioned using percent of population, percent of subscribers, or some other simple, tractable method that provides a good proxy for the share of tax base in each state.

---

[21]The appropriate base for bundled services was discussed above.

OTHER CONSIDERATIONS

Compliance

Both destination-based and source-based taxes on electronic commerce give rise to incentives and opportunities for tax evasion and tax avoidance. With a source-based tax, the potential for tax avoidance through extensive tax base flight seems especially acute. With a destination-based tax, the larger problem becomes tax evasion through nonremittance of use tax by final consumers. Despite this potential problem, we advocate a destination-based tax over the alternatives (including the alternative of no tax on electronic commerce).

Compliance concerns over application of tax to electronic commerce have been recognized. U.S. Treasury (1996), for example, cites concerns over the use of electronic money which promotes anonymity and may preclude tracking transactions. Due and Mikesell (1994) generally argue against use taxes on services, in part because of enforcement problems. Hellerstein (1997) also is concerned about enforcement.[22] Compliance problems for final consumers undoubtedly would arise from destination-based taxes on electronic commerce, as occur with the current state sales and excise taxes.[23] Existing evidence points to elastic consumer responses to interjurisdictional sales tax rate and base differentials. The problem may be more serious for electronic commerce than for tangibles, since consumers confront no transportation costs relative to the traditional border shopping case. Similarly, depending on the nature of the transaction, there may be no shipping, handling and mailing fees, as

---

[22]The administrative side of the compliance coin will need further scrutiny. A specific question is the viability of electronic and/or hard-copy paper trails for electronic commerce, and whether they will support effective auditing and enforcement. A multi-group task force is addressing the more general question of record keeping in the electronic age. See, for example, Federation of Tax Administrators (1996). A separate issue is whether tax administrators will have authority to examine records of third parties such as credit card companies and financial intermediaries. The use of this information may be critical to effective administration of the tax.

[23]Murray (1997) provides a brief review of the literature on the effects of sales tax differentials on consumer behavior.

would be the case with mail order sales. Moreover, the "frontier attitude" that seems to permeate the Web may encourage consumer abuse. At the same time, tax evasion will not likely compromise the tax base in the near term because of the relatively small volume of electronic trade, the nontaxable status of many of the same transactions and consumer concerns over secure payment mechanisms.

An important step in maintaining compliance is assigning nexus to out-of-state electronic marketers. Nexus not only activates the tax remittance mechanism, but also allows tax administrators to enforce the tax through examination of vendor's records. Absent nexus, an evasion problem will emerge as consumers choose not to remit tax voluntarily. Tax administrators will not be able to directly or indirectly observe such transactions and their enforcement powers will be muted.

Even if nexus guidelines are pushed to encompass out-of-state electronic merchants, problems will remain. The most acute problems for a destination-based sales tax would arise in determining the points of origin and termination for electronic transactions and the billing address for consumers. The origin/destination problem is complicated by the very nature of the Internet, which may make it impossible to trace transactions from endpoint to endpoint. This in turn may preclude electronic merchants (and tax administrators) from determining where consumption takes place for tax purposes.

The use of a billing address to situs electronic transactions is problematic at best.[24] For example, if one pays for an electronic service with a credit card, services typically would be billed directly to the credit card company address rather than to the consumer's service address. Practical rules could be developed to use a declared billing address for final consumers;[25] alternatively, the verification process for credit card use could require that the consumer's zip code (or simply state of billing) be returned to the merchant with approval to charge to the card. But any such approach could

---

[24]See Grierson (1996a) for a similar discussion.

[25]This is implicit in the sign-on practices of companies such as American OnLine (AOL). To use AOL, one must provide credit card information and request a set of *local* numbers that the consumer may use to access the service. The local dialing number would presumably reflect the situs of receipt of electronic services.

be abused. For example, an individual could establish a billing address in a low tax jurisdiction (using a post office box, the address of friends or relatives, a second home and so on), yet access and consume services in a high tax jurisdiction. Services are now available that allow an individual's mail to be sent to a private mail service center, which will in turn forward the mail to a second address. Tax administrators could seek to verify consumer's addresses, but this would come at very high cost and produce little additional revenue.[26]

U.S. Treasury (1996) discusses digital identification systems whereby explicit protocols could be established to ensure the proper identification of buyers. Such a system could conceivably be imposed on the electronic commerce industry, although there would be concerns over privacy and the costs of compliance.[27] Moreover, while the IDs can authenticate the identification, it is not clear how one would ensure that a billing address is the actual service address of the consumer.

A more serious problem in identifying the situs of consumption arises from the use of unaccounted electronic currency.[28] Since there is no way to trace unaccounted money back to its source, vendors would be forced to rely on the consumer's self-declaration of situs of use, in which case all consumers of electronic commerce could declare their state of residence in a non-sales tax state such as Oregon. A major drawback to consumer's use of unaccounted currency is the lack of a central accounting system that can track the flow of funds. One possible outcome is that consumers could pay for transactions and have merchants deny receipt of funds, with no means to verify payment. Such problems will likely limit the use of unaccounted money to transactions of modest value.

---

[26]A separate problem is that some electronic services might be consumed at locations other than the billing address for reasons other than avoiding tax. For example, one might travel and choose to acquire services while visiting friends. To the extent possible, tax needs to be imposed at the destination of consumption. It may be necessary to compromise in some instances and simply use a billing address, in lieu of other information.

[27]Digital identification services are currently available, such as through VeriSign, Inc. Information on these systems can be found on the World Wide Web.

[28]The U.S. Department of Treasury (1996) provides a more detailed discussion of accounted and unaccounted money.

Federal Preemption

Inconsistent and uncertain tax policies directed toward electronic commerce and telecommunications have raised the specter of Federal preemption. But Congress has failed to act in other areas that could have similar impacts, such as state personal and corporate income taxes and franchise taxes. Direct pressure has been placed on Congress to address more specific interstate tax policy questions and Congress has been reticent to intercede. A recent example is interjurisdictional fiscal competition through the use of economic development incentives, which some view as counter to the national interest.[29] There also is the long-standing issue of mail order sales, which Congress has repeatedly failed to act on.

Federal intervention might take several forms, from intrusive preemption of state policy to the provision of enabling legislation. The strongest and most ill-advised action would be a moratorium on subnational taxation of electronic commerce and telecommunications. One recent example is the preemption of local government's ability to tax direct broadcast satellite services by the Telecommunications Act of 1996. An alternative would be the imposition of a single, uniform tax rate on some set of interstate electronic transactions, similar to the proposal considered and rejected by the ACIR (1986) in the context of mail order sales. Another option would be congressional action to resolve the debate over third party tax collection and remittance obligations. It is highly likely that the states will continue their efforts to impose collection obligations on third parties using evolving theories of nexus, because of their inability to collect tax from sellers (because of the lack of substantial nexus) and final consumers (because of poor voluntary compliance). Congress might require that the collection burden formally fall on the seller of the primary service (e.g., content) as opposed to the seller of the secondary service (the transmission conduit through which content travels), although it is not at all

---

[29]See the debate in "The Economic War Among the States," contained in a special issue of *The Region* (volume 10, June 1996), published by the Federal Reserve Bank of Minneapolis.

obvious how such legislation might be structured. The general absence of such sweeping interventions in the past, coupled with questions of federalism and states' rights, will likely forestall such initiatives. Nonetheless, the mere threat of Federal preemption may be an important catalyst for the states to act.

Less intrusive forms of federal preemption have been put on the table as well. An example is the Internet Tax Freedom Act, intended to rein in state and local taxes "that would interfere with the free flow of commerce via the Internet.." (Houghton, 1997). The Act would permit subnational governments to levy net income taxes, fairly apportioned business license fees and taxes on internet activities if functionally equivalent services provided via alternative means are also taxable. Part of the objective here is to promote a level playing field. But the basis for Federal action in this context is questionable since there are myriad situations where taxes diverge across subnational jurisdictions. The Federal government also might mandate the use of digital identification systems to protect both consumers and businesses from fraud and abuse. Such a move could be instrumental in supporting tax enforcement.

More appropriate and justifiable than federal preemption is federal enabling legislation. The prime example would be congressional action to clarify nexus standards for firms involved in interstate commerce involving intangibles, in general, and electronic services in particular. Even if Goldberg v. Sweet and Jefferson Lines provide a case basis for nexus determination, which may or may not be true, litigation and uncertainties will continue for years. Accordingly, we strongly recommend Congressional action to resolve this problem once and for all.

In the meantime, several alternatives to a Federal solution will be pursued, although we are not optimistic that these efforts will fully resolve the nexus question. One is the current effort by the NTA, in cooperation with the Multistate Tax Commission, the Federation of Tax Administrators, and business and other groups, to resolve interstate issues regarding electronic commerce. A second is development of uniform standards through the National Conference of Commissioners of Uniform State Laws (NCCUSL), the developers of the Uniform Division of Income for Tax Purposes Act (UDITPA). Requests have been made to seek NCCUSL's involvement in developing electronic commerce tax policy. In each of these cases, complete participation by all sales taxing jurisdictions cannot be expected, and the nexus problem will not be fully resolved. Again, the appropriate remedy is

expeditious Congressional action.

Local Options

Our focus throughout this discussion has been almost exclusively on state-level policy, but the important issue of substate tax policy towards electronic commerce remains. Our recommendation, which applies generally to all mobile services, is to promote substate conformity of tax rates and bases. The rationale is to minimize administrative and compliance costs and to promote neutrality. Out-of-state sellers should be required to conform to a single rate and base within each state, rather than to independent rates or bases for each local government. The rate applied to these transactions should be the state rate plus the lowest local option rate. Situsing of sales would be facilitated, since only the state (as opposed to specific local area) of destination would be needed to assess and remit tax. The states would then have discretion for allocating receipts across substate areas.

CONCLUSION

While issues associated with taxing electronic commerce are vexing, they generally are not new. The discussions of taxing electronic commerce are similar to those that took place ten years ago on taxing services. The key goal in sales tax policy must be to tax all consumption the same, and particularly to tax functionally equivalent activities in similar ways. The argument that electronic commerce should remain untaxed because it is the last frontier, is merely a restatement of the infant industry argument that has been rejected by economists for many years. As in the case with services, the sales tax will not be destroyed by failing to fully tax electronic commerce. What would happen is that the sales tax would remain the levy on tangible goods that it has traditionally been, and the tax base as a share of consumption will slowly decline with growth in electronic commerce, a pattern that experience from the past 15 years shows is already underway. Horizontal equity and neutrality will be further compromised, and the ways that businesses operate will be significantly distorted. Indeed, neutrality and horizontal equity are the important and appropriate reasons to tax electronic commerce, rather than simply to increase state tax revenues. Further, exclusion of electronic commerce from the

base, not its taxation, distorts interstate commerce, since this offers the opportunity to make transactions that are untaxed when offered in one form (electronic), and taxed in another form.

To tax electronic commerce, the major policy proposals contained here include: (1) tax electronic commerce transactions broadly, and particularly in areas where functionally equivalent activities are taxed; (2) use an economic presence definition of nexus, either through an expansive interpretation of nexus or through federal enabling legislation; (3) situs transactions on a destination basis; and (4) allow direct use exemptions for production of electronic services. Some will argue these recommendations go too far, while other will argue we have not gone far enough.

There are numerous other issues to be addressed. For example, electronic commerce offers a number of opportunities for tax evasion and avoidance through the use of unaccounted money, international delivery of services and erroneous points of consumption. Means for limiting these avoidance and evasion mechanisms must be identified, including the involvement of credit card companies and financial intermediaries. Ways to audit and enforce the tax must grow with new technology and developments in the industry, and these may call for differences in legal design. New services and issues will arise and, as with other aspects of tax policy, require ongoing development in the structure of sales taxation.

REFERENCES

Advisory Commission on Intergovernmental Relations. *Taxation of Interstate Mail Order Sales: 1994 Revenue Estimates*. Washington, DC: ACIR, 1994.

_____. *State and Local Taxation of Out-of-State Mail Order Sales*. Washington, DC: ACIR, 1986.

Commerce Clearing House. *State Tax Review* (March 10, 1997): 2-4.

Cnossen, Sijbren. "Administrative and Compliance Costs of the VAT: A Review of the Evidence." *Tax Notes International* (June 20, 1994): 1649-68.

Due, John F. and John L. Mikesell. *Sales Taxation*. Washington, DC: Urban Institute Press, 1994.

Eisenstein, Martin I. "The Constitutional Limits of Sales Taxation of Cyberspace." *State Tax Notes* (February 24, 1997): 601-605.

Federation of Tax Administrators. "Federation of Tax Administrators Releases Model Recordkeeping and Retention Regulation Report." *State Tax Notes* (April 29, 1996): 1315-23.

Fox, William F. and Matthew N. Murray. "Economic Aspects of Taxing Services." *National Tax Journal* XLI (1988): 19-36.

Fox, William F., Henry Herzog and Alan Schlottmann. "Metropolitan Fiscal Structure and Migration." *The Journal of Regional Science* 29 (1989):523-36.

Frieden, Karl A. and Michael E. Porter. "The Taxation of Cyberspace: State Tax Issues Related to the Internet and Electronic Commerce." *State Tax Notes* (November 11, 1996): 1363-1394.

Grierson, R. Scot. "State Taxation of the Information Superhighway: A Proposal for Taxation of Information Services." *Loyola of Los Angeles Entertainment Law Journal* 16 (1996): 603-655.

Grubert, Harry and T. Scott Newlon. "The International Implications of Consumption Tax Proposals." *National Tax Journal* XLVIII (1995): 619-647.

_____. "Constitutional Limitations on State Taxation: Sales and Use Nexus on the Information Highway." *State Tax Notes* (February 19, 1996): 589-597.

Hellerstein, Walter. "Telecommunications and Electronic Commerce: Overview and Appraisal." *State Tax Notes* (February 17, 1997): 519-526.

Houghton, Kendall L. "Where Electronic Commerce is Concerned, Caveat Emptor (Let the Buyer BeWare): An Analysis of Ongoing Efforts to Define State and Local Taxation Policy." *State Tax Report* 97 (1997): 8-11.

Interactive Services Association Task Force. "White Paper: Logging on to Cyberspace Tax Policy" *State Tax Notes* (January 20, 1997): 209-221.

McHugh, Richard. "Telecommunications Taxation: The Georgia Case." Georgia Fiscal Research Program, College of Business Administration, Georgia State University, Atlanta, GA., May 1996a.

McHugh, Richard. "Sales Taxation of Telecommunications Services in the State of Utah." Policy Research Center, Georgia State University, Atlanta, GA., 1996b.

Multistate Tax Commission. "Nexus Program Bulletin, NB 95-1." Washington, DC: Multistate Tax Commission, 1995.

Multistate Tax Commission. "Multistate Tax Commission Issues Working Draft on Constitutional Nexus Guideline." *State Tax Notes* (December 16, 1996): 1765-71.

Murray, Matthew N. "Would Tax Evasion and Tax Avoidance Undermine a National Retail Sales Tax?" *National Tax Journal* L (1997):167-182.

Sandford, Cedric, Michael Godwin and Peter Hardwick. *Administrative and Compliance Costs of Taxation*. Bath: Fiscal Publications, 1989.

Steele, Thomas H. "Nexus at the Dawn of the Electronic Commerce Revolution." *State Tax Notes* (April 7, 1997): 1073-1088.

U.S. Department of Treasury. "Selected Tax Policy Implications of Global Electronic Commerce." Bureau of National Affairs, Washington, DC: 1996.